

Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risk posed by releases of harmful substances.

## Goal Purpose

EPA's land preservation and restoration goal presents our strategic vision for managing waste, conserving and recovering the value of wastes, preventing releases, responding to emergencies, and cleaning up contaminated land. Uncontrolled wastes can cause acute illness or chronic disease and can threaten healthy ecosystems. Cleanup almost always costs more than prevention and contaminated land can be a barrier to bringing jobs and revitalization to a community. Disposed wastes also represent a loss of important material and energy values.

EPA employs a hierarchy of approaches to protect the land, including reducing waste at its source, recycling waste for materials or energy values, managing waste effectively to prevent spills and releases of toxic materials, and cleaning up contaminated properties. Under this goal, EPA works to ensure that hazardous and solid wastes are managed safely at

industrial facilities. Working with states, tribes, local governments and responsible parties, we clean up uncontrolled or hazardous waste sites and return land to productive use. Similarly, we work to address risks associated with leaking underground storage tanks and wastes managed at industrial facilities.

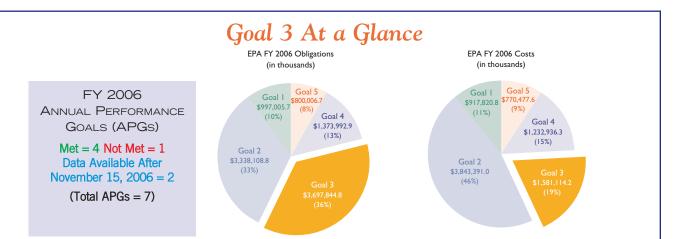
We are helping develop public-private partnerships to conserve resources in key areas. We collaborate with our partners in innovative, non-regulatory efforts to minimize the amount of waste generated and promote recycling to recover materials and energy. Through programs like our Resource Conservation Challenge, we promote opportunities for converting waste to economically viable products, which conserve resources.

We also work closely with other government agencies to ensure that we are ready to respond in the event of an emergency which could affect human health or the environment. Under this goal, we strive to improve our preparedness and response capabilities, particularly in the area of homeland security.

Finally, we conduct and apply scientific research to develop cost-effective methods for managing wastes, assessing risks, and cleaning up hazardous waste sites.

#### **Contributing Programs**

RCRA Waste Management
RCRA Corrective Action
RCRA Waste Minimization
Superfund Emergency Preparedness
Superfund Remedial
Superfund Enforcement
Superfund Removal
Federal Facilities
Oil Spills
Leaking Underground Storage Tanks
Underground Storage
Tank Compliance
Land Science and Research Program
Homeland Security



GOAL 3 FY 2006 PERFORMANCE AND RESOURCES			
STRATEGIC OBJECTIVE	APG STATUS	OBLIGATIONS	COSTS
OBJECTIVE I-PRESERVE LAND  By 2008, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of was and petroleum products at facilities in ways that prevent releases.		\$237,779.6	\$222,156.6
OBJECTIVE 2–RESTORE LAND  By 2008, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.	3 Goals Met I Goal Not Met	\$3,368,195.0	\$1,300,792.3
OBJECTIVE 3–ENHANCE SCIENCE AND RESEARCH Through 2008, provide and apply sound science for protecting an restoring land by conducting leading-edge research and developin better understanding and characterization of environmental outcomes under Goal 3.		\$91,870.2	\$58,165.3
GOAL 3 TOTAL	7 APGs	\$3,697,844.8	\$1,581,114.2

#### IN THE YEARS AHEAD...

EPA's annual performance goals are stepping stones to longer-range results. These results are specified in a series of "Strategic Targets" that lay out the work we intend to accomplish over the next several years to achieve our objectives under Goal 3. Meeting our annual performance goals moves us closer to such Strategic Targets as:

By 2011, increase reuse and recycling of construction and demolition debris by 6 percent from a baseline of 59 percent in 2003.

Each year through 2011, minimize the number of confirmed releases at underground storage tank facilities to 10,000 or fewer from a universe of approximately 650,000 underground storage tanks.

By 2011, prevent releases at 500 RCRA hazardous waste management facilities by implementing initial approved controls or updated controls.

By 2011, ensure that 36 percent (345) of 966 final and deleted construction complete National Priority List sites are ready for reuse site-wide.

For a complete list of strategic targets, see EPA's new 2006–2011 Strategic Plan, available at http://www.epa.gov/ocfo/plan/htm.



# Strategic Objective I— Preserve Land

By 2008, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.

#### **WASTE MINIMIZATION**

In the area of municipal waste reduction and recycling, 2006 was a very successful year for several of our key partnership programs. Membership increased in two of our premier programs: WasteWise, which focuses on partnerships with businesses and institutions such as universities, hospitals, non-profits, and state, local, and tribal governments, added 150 new members for a total of more than 1,600; and GreenScapes, which focuses on organics reuse, added 24 members for a total of 90. The municipal waste reduction and recycling program is successfully educating the public about the benefits of recycling and how to increase their participation in recycling programs.

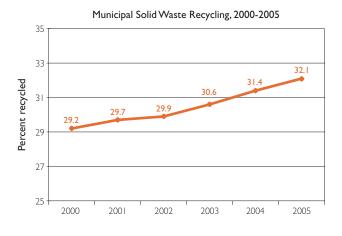
STRATEGIC OBJECTIVE I—PRESERVE LAND			
APG #	APG Title	APG Status	
		Data Available in FY 2008	
3.1	3.1 Municipal Solid Waste Source Reduction	X Goal Not Met for FY 2005	
		X Goal Not Met for FY 2004	
3.2 Waste and Petroleum Management Contro	Maste and Detucloum Management Controls	Data Available in FY 2007	
	vvaste and recroledin Panagement Controls	Goal Met for FY 2005	

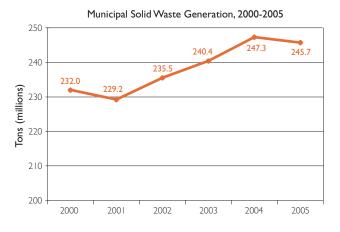
Detailed information on these APGs is provided in Section II.2 – Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, pages 160–161. Additionally, the data that EPA has used to measure its performance are described in the "Supplemental Information" to this report, provided on the Internet. See pages B-78–B-81 at http://www.epa.gov/ocfo/finstatement/2006PAR.

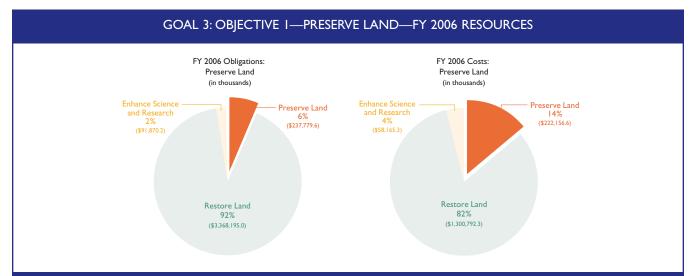
In 2006, EPA finalized its data collection for 2004 and 2005 which demonstrates that EPA has achieved progress toward meeting its municipal solid waste (MSW) reduction goals, including diverting a cumulative total of 83.1 million tons MSW by FY 2006 and maintaining daily per capita generation of MSW at 4.5 pounds.

EXPLANATION OF MISSED
GOALS (SEE SECTION II.2
FOR PERFORMANCE RESULTS
AND TREND INFORMATION):

APG 3.1:In 2004 and 2005, the nation generated more than 247.3 million tons and 245.7 million tons of municipal solid waste, and recycled more than 77.7 and 79.0 million tons,







#### FY 2006 Resources for Program Projects Supporting this Objective\*

Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY 2006 COSTS
Categorical Grant: Hazardous Waste Financial Assistance	\$80,067.5	\$72,847.6
Categorical Grant: Tribal General Assistance Program	(\$4.6)	\$107.5
Categorical Grant: Underground Storage Tanks	\$15,040.7	\$10,895.9
Compliance Assistance and Centers	\$569.6	\$533.0
Congressionally Mandated Projects	\$1,747.9	\$2,270.3
Homeland Security: Communication and Information	\$250.0	\$231.2
Homeland Security: Protection of EPA Personnel and Infrastructure	\$883.2	\$1,142.3
LUST / UST	\$9,084.3	\$8,099.1
RCRA:Waste Management	\$67,298.8	\$70,304.7
RCRA:Waste Minimization & Recycling	\$9,604.6	\$9,406.0
Administrative Law	\$178.7	\$177.1
Alternative Dispute Resolution	\$50.4	\$60.1
Central Planning, Budgeting, and Finance	\$2,558.9	\$2,386.2
Civil Rights / Title VI Compliance	\$441.8	\$475.0
Congressional, Intergovernmental, External Relations	\$1,960.1	\$2,090.4
Exchange Network	\$1,321.3	\$615.8
Facilities Infrastructure and Operations	\$24,107.9	\$24,162.6
Acquisition Management	\$992.2	\$991.4
Human Resources Management	\$1,976.9	\$1,912.4
Information Security	\$185.6	\$160.6
IT / Data Management	\$13,385.1	\$7,068.5
Legal Advice: Environmental Program	\$1,769.9	\$1,824.4
Legal Advice: Support Program	\$635.7	\$669.2
Audits, Evaluations, and Investigations	\$1,383.4	\$1,483.1
Regional Science and Technology	\$162.7	\$165.0
Science Advisory Board	\$185.9	\$197.7
Small Minority Business Assistance	\$78.3	\$95.6
Financial Assistance Grants / IAG Management	\$1,183.2	\$1,173.1
Regulatory/Economic-Management and Analysis	\$679.4	\$610.8
TOTAL	\$237,779.4	\$222,156.6

<sup>\*</sup>Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

respectively. These results do not meet the annual targets of 79 million tons recycled in FY 2004 and 81 million tons recycled in FY 2005 because the percentage increase in the generation of MSW in the U.S. outpaced the percentage increase in recycling. EPA is targeting its efforts to encourage the reduction and recycling of the most significant waste streams: paper, organic wastes, and containers and packaging. In addition, EPA did not met the 2004 target, but did meet the 2005 target for maintaining a daily per capita generation of solid waste rate of 4.5 pounds/person/ day. The annual daily per capita generation rate in 2004 and 2005 was 4.6 and 4.5 pounds/person/ day, respectively.

EPA and its partners continued to develop a multi-agency federal strategy for removing legacy accumulations of dangerous chemicals and implementing sustainable chemical management plans in schools to prevent future accumulations of chemicals. Grants were awarded to seven programs (e.g., state-level programs, state partnerships with localities) in FY 2006 to remove legacy chemicals and implement chemical management practices. As a result of the FY 2004 grants, 175,000 pounds of legacy chemical accumulations were removed. and safe chemical management practices were implemented in approximately 500 schools. An estimated 300,000 children, as well as school personnel, enjoy a reduced risk of exposure to dangerous chemicals.

Additionally, as part of our effort to encourage safe recycling

and reuse of electronics, EPA promulgated the final rule for Cathode Ray Tubes (CRTs) in 2006. A CRT is the glass video display component of an electronic device. The benefits of this rule are substantial: conservation of landfill capacity, increase in resource efficiency, growth of a recycling infrastructure for CRTs, and reduction of lead emissions to the environment from CRT recvcling. Approximately 3,690 tons or 545,000 cubic feet of CRTs per year will be directed away from landfills towards recycling. We estimate that the rule will save CRT handlers \$5.0 million per year in reduced administrative, transportation, and disposal costs.

## HAZARDOUS WASTE FACILITY PERMITTING

EPA's primary approach to preventing releases of hazardous waste is issuing facility permits that mandate appropriate controls for each site. The permitting program exceeded its 2006 annual target of increasing the percentage of hazardous waste management facilities under appropriate controls by 2.5 percent. During 2006, EPA increased the percentage of facilities under control to 4.3 percent. The program expects to bring 95 percent of the facilities under approved controls by the end of FY 2008.

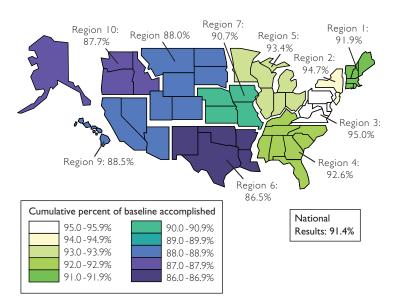
Hazardous waste facilities that do not have approved controls often present complex management issues. Developing approved controls for large federal facilities, particularly those with nontraditional treatment units is difficult. These facilities are complex and require more time to evaluate

#### "Green" Electronics

The EPA-funded Electronic Products Environmental Assessment Tool is designed to help purchasers identify and buy green computers, laptops, and monitors. Since July 2006, more than 118 models of desktop computers, laptops, and monitors now bear the Electronic Products **Environmental Assessment** Tool (EPEAT) label, and this initial list of EPEAT-registered products is growing as additional manufacturers register products. EPEAT is already referenced in nearly \$200 billion worth of computer contracts, including contracts issued by the Department of Defense, the Department of Homeland Security, the National Aeronautics and Space Administration, and the States of Minnesota and Massachusetts. EPA conservatively estimates that over the next 5 years, purchases of EPEAT computers will result in reductions totaling more than 13 million pounds of hazardous waste, more than 3 million pounds of non-hazardous waste, and more than 600,000 MWh of energy—enough to power 6 million homes.



#### Regional Permitting Program Progress Fiscal Year 2006, End of Year Results



technical information, address risks, and deal with public concerns. Many of the 84 hazardous waste facilities that came under approved controls in FY 2006 had relatively difficult types of units to address. For example, a boiler facility in Ohio was difficult to permit because more stringent conditions were required for mercury control than specified in the federal regulations.

EPA has made progress with reducing the regulatory burden on hazardous waste operations. In April 2006, the Agency completed a deregulatory action by publishing the final "RCRA Burden Reduction Rule." The final rule streamlined RCRA record keeping and reporting requirements, saving the RCRA regulated community an estimated \$2-3 million per year, with no reduction in environmental protection.

On September 5, 2006, all hazardous waste handlers in the

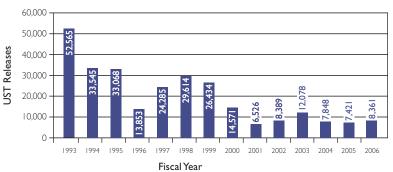
United States were required to begin using the new Uniform Hazardous Waste Manifest Form. This standard form streamlines the waste handling process, helps interstate commerce, and reduces regulatory paperwork while ensuring the continued safe management of hazardous waste. The benefits of this rule are substantial. More than 139,000 facilities in the United States generate, transport, or manage RCRA waste. About 12 million tons of hazardous waste per year are manifested for shipment, involving 2.4 to 5.1 million manifests, requiring 4.4 to 9.2 million labor hours, and

costing \$187 to \$733 million annually. EPA estimates that the standardized form and associated rule revisions will result in \$12.7 to \$20.6 million in cost savings annually, while improving the hazardous waste manifest system.

#### UNDERGROUND STORAGE TANK SIGNIFICANT OPERATIONAL COMPLIANCE AND CONFIRMED RELEASES

To prevent releases from underground storage tanks (USTs), EPA and its partners ensure that UST systems are in significant operational compliance (SOC) with required release detection and release prevention equipment and that the equipment is used, functioning, and properly maintained. End-of-year performance data for the UST compliance program will be available in December 2006. EPA achieved a SOC rate of 66 percent in FY 2005 thereby exceeding the target of 65 percent. Through its compliance activities, EPA remains committed to maintaining the number of confirmed releases at UST facilities at 10,000 or fewer. At the end of FY 2006, the actual number of confirmed releases was 8,361.

#### Confirmed Releases: Nationwide



## ADDITIONAL INFORMATION RELATED TO OBJECTIVE 1:

**GRANTS:** State and Tribal Assistance Grants were awarded to 50 states: Washington, DC; Puerto Rico; 4 territories; and 16 tribes through the Underground Storage Tanks (UST) categorical grants to encourage owners and operators to properly operate and maintain their USTs. Tribal grants funded projects that included the development of UST compliance assistance and certification programs and compliance assistance visits, technical support to tribes, tribal UST owner/operator training workshops and outreach materials, conducting UST compliance inspections and tracking significant operational compliance in Indian Country, UST program capacity building, and oversight of UST program implementation.

State and Tribal Assistance Grants also provided funding to states implementing the UST provisions of the Energy Policy Act. These grants included funding for conducting inspections at previously uninspected facilities, developing third-party inspection programs to enable states to increase inspection presence, and preparing to implement delivery prohibition, secondary containment and other Energy Policy Act requirements.

PART: The RCRA Recycling, Waste Minimization and Waste Management program was assessed in the 2004 PART process and received a rating of "adequate." In response to the PART process, the program is developing an efficiency measure for the waste minimization component of the RCRA base program.

The Oil Spill program was assessed in the 2005 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include developing a forum to share and implement best practices among Regional offices that will improve the program's overall performance and efficiency.

The UST Grants program is being assessed in the 2006 PART process and results will be included in the FY 2008 President's Budget.

#### Web Links:

http://www.epa.gov/oust/aboutust.htm http://www.epa.gov/oust/fedlaws/ epact\_05.htm#Final http://www.epa.gov/epaoswer/osw/ http://www.epa.gov/epp/pubs/products/ epeat.htm http://www.epa.gov/oilspill/



# Strategic Objective 2— Restore Land

By 2008, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.

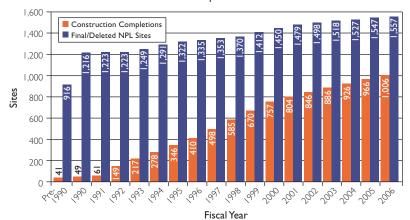
To meet its objective to control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other actions, and to make land available for reuse, EPA achieved the following results in FY 2006:

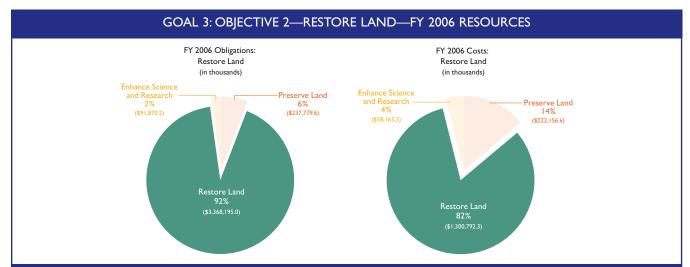
- Made 518 final site-assessment decisions under Superfund, exceeding the target of 419.
- Controlled all identified unacceptable human exposures from site contamination for current land and/or groundwater use conditions at a net total of 34 additional Superfund human exposure sites, exceeding the target of 10.
- Controlled the migration of contaminated groundwater through engineered remedies

STRATEGIC OBJECTIVE 2—RESTORE LAND			
APG #	APG Title	APG Status	
3.3	Assess and Cleanup Contaminated Land	Goal Met for FY 2006	
3.4	Superfund Cost Recovery	Goal Met for FY 2006	
3.5	Superfund Potentially Responsible Party Participation	Goal Met for FY 2006	
3.6	Prepare/Respond to Accidental/Intentional Releases	Goal Not Met for FY 2006	

Detailed information on these APGs is provided in Section II.2—Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, pages 161–164. Additionally, the data that EPA has used to measure its performance are described in the "Supplemental Information" to this report, provided on the Internet. See pages B-78–B-81 at http://www.epa.gov/ocfo/finstatement/2006PAR.

Number of Construction Completions and Final/Deleted NPL Sites





#### FY 2006 RESOURCES FOR PROGRAM PROJECTS SUPPORTING THIS OBJECTIVE\*

Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY 2006 COSTS
Categorical Grant: Hazardous Waste Financial Assistance	\$29,508.2	\$26,706.6
Base Realignment and Closure (BRAC)	\$8,750.2	(\$5.4)
Civil Enforcement	\$2,548.4	\$2,527.0
Compliance Assistance and Centers	\$266.0	\$261.7
Congressionally Mandated Projects	\$212.1	(\$1,031.9)
Homeland Security: Communication and Information	\$627.2	\$470.6
Homeland Security: Preparedness, Response, and Recovery	\$38,626.3	\$34,468.6
Homeland Security: Protection of EPA Personnel and Infrastructure	\$2,085.6	\$2,559.6
LUST / UST	\$27,764.0	\$10,194.6
LUST Cooperative Agreements	\$75,407.I	\$61,964.2
Oil Spill: Prevention, Preparedness and Response	\$27,358.5	\$13,138.6
RCRA: Corrective Action	\$38,754.7	\$39,792.5
Superfund: Emergency Response and Removal	\$669,157.1	\$190,233.6
Superfund: Enforcement	\$181,647.5	\$118,728.6
Superfund: EPA Emergency Preparedness	\$11,219.0	\$10,471.6
Superfund: Federal Facilities	\$33,894.4	\$28,497.1
Superfund: Federal Facilities IAGs	(\$8.6)	(\$6.8)
Superfund: Remedial	\$1,971,858.8	\$557,107.2
Superfund: Support to Other Federal Agencies	\$5,462.2	\$5,135.2
Administrative Law	\$970.4	\$961.7
Alternative Dispute Resolution	\$633.9	\$540.4
Central Planning, Budgeting, and Finance	\$37,180.3	\$30,514.8
Civil Rights / Title VI Compliance	\$2,848.5	\$3,051.7
Congressional, Intergovernmental, External Relations	\$14,107.0	\$14,759.6
Exchange Network	\$4,677.7	\$3,772.1
Facilities Infrastructure and Operations	\$84,022.8	\$74,317.2
Acquisition Management	\$19,105.6	\$16,821.8
Human Resources Management	\$6,239.5	\$5,892.8
Information Security	\$332.8	\$602.9
IT / Data Management	\$32,529.0	\$21,638.0
Legal Advice: Environmental Program	\$2,048.9	\$2,014.4
Legal Advice: Support Program	\$417.2	\$427.0
Audits, Evaluations, and Investigations	\$17,922.2	\$5,275.2
Regional Science and Technology	\$1,215.7	\$1,409.4
Science Advisory Board	\$1,009.6	\$1,073.5
Small Minority Business Assistance	\$425.2	\$519.0
Financial Assistance Grants / IAG Management	\$3,741.8	\$3,548.3
Superfund: Federal Facilities Enforcement	\$9,939.7	\$9,122.9
Regulatory/Economic-Management and Analysis	\$3,688.7	\$3,316.3
TOTAL	\$3,368,195.2	\$1,300,792.2

<sup>\*</sup>Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

or natural processes at a net total of 21 additional Superfund groundwater exposure sites, exceeding the target of 10.

- Selected final remedies (cleanup targets) at 37 Superfund sites, exceeding the target of 10.
- Completed construction of remedies at 40 Superfund sites, meeting the target of 40.

During FY 2006, the Superfund program conducted an intensive analysis of the human exposure determination for each site on the National Priority List (NPL) to ensure that the human exposure determinations are made consistently nationwide and reflect similar environmental conditions. With regard to efficiency measures, the Superfund removal program completed 1.02 removal actions per million dollars, thereby meeting the target of 0.91.

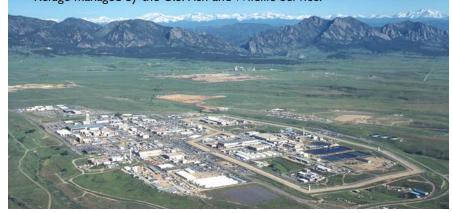
The Superfund Enforcement Program continues to pursue the "Enforcement First" and "Smart Enforcement" strategies. The "Enforcement First" strategy allows EPA to focus appropriated funds on sites where potentially responsible parties either do not exist or lack the funds or capabilities needed to conduct the cleanup. "Smart Enforcement" ensures that EPA utilizes the most appropriate enforcement or compliance tools to address the most significant problems to achieve the best outcomes. By applying these two strategies, EPA met both of its FY 2006 Superfund enforcement goals, which are to reach a settlement or taking an enforcement action by the start of Remedial Action (RA) at 95

#### Rocky Flats Superfund Site

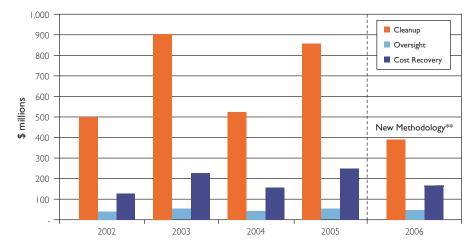
The Rocky Flats Superfund site, a 6,500-acre former nuclear weapons facility located approximately 16 miles northwest of Denver, CO and within 50 miles of 2.5 million people, is the first former Department of Energy weapons plant to achieve construction completion. EPA and its



partners treated, stabilized, or removed 34,731 cubic yards of soil or other solid-based media (roughly equivalent to 6.5 football fields, covered I yard deep) and 12,082,393 gallons of water or other liquid-based media (roughly equivalent to 16 Olympic-sized swimming pools) contaminated with radioactive plutonium, uranium, other radionuclides, and volatile organic compounds. Construction was completed in FY 2006, 14 months ahead of schedule and \$560 million under budget. The majority of the site will become a National Wildlife Refuge managed by the U.S. Fish and Wildlife Service.



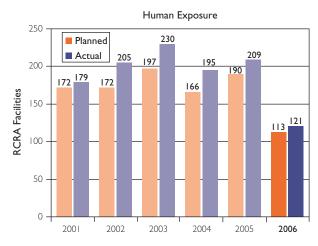
FY 2006 Compliance & Enforcement Annual Results
Potentially Responsible Party Commitments
for Superfund Site Cleanup, Oversight, and Cost Recovery,
FY 2002–FY 2006

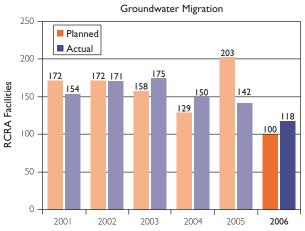


Data Source: Cleanup & Cost Recovery—Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) EOY Data Pull Oversight—Integrated Financial Management System (IFMS) EOY Data Pull

<sup>\*</sup>In FY 2006, the Office of Site Remediation Enforcement (OSRE) changed the reporting requirements for Consent Decrees (CDs) to count only CDs that have been entered by the courts. In previous years, OSRE gave credit at the referred, lodged or entered stages. For FY 2006, the chart shows results based on the new methodology. The amounts for FY 2006 cleanup and cost recovery include some CDs that were counted in previous years (at the referred or entry stages). In order to present total Potentially Responsible Party (PRP) commitments, the chart now includes oversight amounts billed to PRPs in addition to PRP cleanup commitments.

#### RCRA Environmental Indicators





percent of non-federal Superfund sites that have viable, liable parties, and to address cost recovery at all NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than \$200,000.

Through enforcement, settlement, or compromise/write-off, cost recovery was addressed at 162 NPL and non-NPL sites, of which 63 cost recovery cases had outstanding unaddressed past costs. EPA also secured private party commitments for cleanup and cost recovery, and billed private parties for oversight, for amounts that exceeded \$602 million.

For the universe of 1,698 RCRA corrective action facilities, the 2006 targets for the percentage of facilities with current human exposures under control, with migration of contaminated groundwater under control, and with final remedies constructed was 82, 68, and 13, respectively. In each case EPA exceeded these targets by increasing the percentage to 89, 74, and 22, respectively.

EPA's RCRA Corrective Action Program continues to emphasize revitalization and reuse of former hazardous waste management sites. For example, Atlantic Station, a mixed use, 375-acre

#### Uncovering the Past: Eastern Surplus Superfund Site, Meddybemps, Maine

Eight thousand years before it served as a dump for hazardous materials, the Eastern Surplus Superfund site in Meddybemps, Maine was home to Native Americans living in ancestral Passamaquoddy territory. Archaeologists have known about the site since the 1960's, but it is only recently that the importance of the site has become more widely recognized through archaeological research completed in 2006. "N'tolonapemk," which means "Our Ancestor's Place," has long been known to the Passamaquoddy Tribe and is described in their oral history and traditional stories.



As required by the National Historic Preservation Act of 1966, EPA's cleanup plan for the Eastern Surplus Superfund site included an archaeological investigation and subsequent education and outreach. Members of the Passamaquoddy Tribe were trained to take part in the excavations conducted by the University of Maine at Farmington. "Tribal people need to be involved in archaeology, so we can have a voice while we look for links to our past," said Passamaquoddy Tribal Historic Preservation Officer, Donald Soctomah. "Being the first person to touch an artifact that your ancestor left behind is pretty powerful stuff."

revitalization of a closed Steel Mill in Atlanta, Georgia, won the prestigious Brownfields Phoenix Award during FY 2006. This vacant property, which was considered a blight to neighbors just a decade ago, is one of the largest revitalization efforts in the country, and is expected to secure close to \$2 billion in investment. It is being developed with a smart growth design that includes green space, residential, and commercial development, and has already become a popular hub for Atlanta residents. Federal and state regulators, the developer and the community collaborated to address the many issues presented by a project of this size and to streamline and phase the cleanup so that portions of business and residential areas are complete and occupied today. Two other Phoenix Award winners this past year were at RCRA sites: the Chester Waterfront Redevelopment Project in Chester, Pennsylvania (a former power plant and solvent recovery site) and the Platte River Commons and Salt Creek Heights Business Center in Casper, Wyoming (a former Amoco/BP refinery).

EPA's Oil Program's exceeded its 2006 target of 100 by conducting 345 inspections and exercises at oil storage facilities required to have Facility Response Plans (FRP). The Agency continues its efforts to improve the accuracy and value of this measure, and since setting this target, additional research has revealed a more precise count of facilities in the FRP universe; future targets will be adjusted accordingly.

# EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

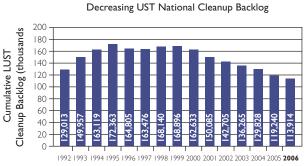
APG 3.6: EPA completed 157
Superfund-lead removal actions in comparison to the FY 2006 target of 195 and completed 93 voluntary removal actions, with EPA oversight, which was short of the target of 115. The lower than expected removal results were directly related to EPA's continued support in FY 2006 of the response to Hurricanes Katrina and Rita—the largest hurricane response and cleanup efforts in the history of the Agency.

EPA's accomplishments during its responses to Katrina and Rita are notable. EPA conducted environmental monitoring and sampling of water, air, floodwater and residual sediment resulting in more than 400,000 analyses; responded to approximately 70 emergency situations to address chemical spills, fires, and other emergencies causing an immediate public threat; supported the overall debris mission with the U.S. Federal Emergency Management Agency and the U.S. Army Corps of Engineers, for which the total estimates are expected to top 118 million cubic yards; provided technical advice and assistance, promoted recycling, handled the disposal of more than 4 million containers of household hazardous waste, assist in the proper handling and recycling of more than 380,000 large appliances (refrigerators, freezers, and air conditioners), and recycled more than 649,000 electronic goods to save important landfill space and ensure the reuse of metal components. Furthermore, EPA continues to provide oversight of the cleanup by Murphy Oil of a large oil spill which affected more than 1,800 homes in St. Bernard Parish, Louisiana.

EPA continued to respond quickly and effectively to emergency releases throughout the country, as highlighted in the 215 oil spills we responded to in 2006. While this is less than the target of 300, it reflects the need for fewer cleanups at the federal level and the success of state and local prevention and preparedness activities in FY 2006.

The target for EPA's Oil Program for the compliance rate of inspected facilities subject to spill prevention, control and countermeasures (SPCC) regulations was 100 percent, and EPA achieved 50 percent compliance for these facilities. The target for the compliance rate of inspected facilities subject to FRP regulations was 100 percent, and EPA completed 71 percent compliance for these facilities. The lower than expected results may be partially explained by the lack of a nationwide definition for compliance in the oil program. In September 2006, EPA adopted a stringent definition of compliance to better address the Sill Prevention, Control and Countermeasure Plan and the Facility Response Plan requirements. This will provide greater consistency and may also necessitate a reassessment of annual targets.

The Leaking Underground Storage Tanks (LUST) Program promotes rapid and effective responses to releases from federallyregulated USTs containing petroleum by enhancing state,



Fiscal Year

Site-Specific Charging at Superfund Sites:
Benchmarking Regional Practices; A
Formative Evaluation of a National
Program for School Pollution Prevention
and Chemical Cleanout (SC3) prepared
by Indtai, Inc. Additional information on
these reports is available in the Program
Evaluation Section, Appendix A, page A-15
and page A-17.

GRANTS: EPA awards Superfund coop-

Comprehensive

Compensation, and

Liability Information

information on these

reports is available in

Appendix A, page A-14

Evaluation Section,

System. Additional

Environmental

Response,

the Program

and page A-15.

GRANTS: EPA awards Superfund cooperative agreements to states, political subdivisions of states, federally-recognized Indian tribes, and U.S. territories. These intergovernmental partners help EPA achieve its strategic goals by sharing the responsibilities for cleaning up sites on the National Priority List (NPL).

Technical Assistance Grants (TAGs) are an important tool for involving the local community meaningfully in the cleanup process. By providing independent technical expertise to local communities, TAGs help community members better understand the technical issues affecting site cleanups, the risks associated with site contamination, and options for effective and safe site remediation.

The Technical Outreach Services for Communities (TOSC) Program provides free, independent, university-based technical assistance to communities facing hazardous waste contamination issues that do not qualify for TAGs. Created in 1994, TOSC has provided more than 200 communities with an independent understanding of technical issues related to hazardous substance contamination, enabling them to participate substantively in the decision-making process.

LUST Cooperative Agreements were awarded to 49 states; Washington DC; Puerto Rico; 4 territories; and 10 tribes. Tribal cooperative agreements funded projects that included site assessments and cleanups; sampling equipment for Tribal inspectors; LUST program capacity building; and oversight of LUST program implementation. In FY 2006, LUST

cooperative agreements provided funding to states for emergency responses, responsible party lead cleanups with state oversight, state-lead cleanups, and state LUST capacity building.

Congress appropriated supplemental funds for necessary expenses to address releases from underground storage tanks related to the consequences of the 2005 Gulf of Mexico hurricanes. EPA received these funds to identify releases of petroleum from underground storage tanks and initiate corrective action as necessary to achieve state-specific cleanup requirements. EPA developed detailed grant guidance and provided the initial funding to the affected states.

PART: The Superfund Remedial program was assessed in the 2004 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include implementing recommendations from the Agency's 120 day study on management of the Superfund program and modernizing the program's data repository.

The Superfund Federal Facilities program was assessed in the 2005 PART process and received a rating of "moderately effective." In response to the PART process, the program is conducting follow-up actions which include working with other Federal agencies to support attainment of long-term environmental and human health goals by reviewing and recommending remedies for cleanup.

The Superfund Removal program was assessed in the 2005 PART process and received a rating of "moderately effective." In response to the PART process, the program is conducting follow-up actions which include modernizing the program's data repository and developing a plan for conducting, on a regular basis, independent evaluations of key areas of the program to determine program performance.

The RCRA Corrective Action program was assessed in the 2003 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include defining new baselines for performance measures and establishing ambitious annual targets to achieve the long-term objectives of the program.

#### Web Links:

http://www.epa.gov/superfund/ http://www.epa.gov/swerffrr/ http://www.epa.gov/epaoswer/ hazwaste/ca/index.htm

local, and Tribal enforcement and response capability. EPA's on-going work focuses attention and efforts on increasing the efficiency of LUST cleanups nationwide. In FY 2006, EPA's state and tribal partners completed 14,493 cleanups, exceeding the target of 13,600. This includes 43 tribal LUST cleanups that exceed the target of 30. EPA will continue to work with states to complete cleanups and reduce the backlog of 116,949 cleanups not yet completed. Since the beginning of the UST program, EPA has cleaned up more than 75 percent (or 350,818) of all reported releases.

## ADDITIONAL INFORMATION RELATED TO OBJECTIVE 2:

#### PROGRAM EVALUATIONS:

Federal Facilities Restoration and Reuse Office (FFRRO): A Comprehensive Review of EPA Policy and Guidance for Federal Facility Cleanup and Property Transfer. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-12.

More Complete Data and Continued Emphasis on Leak Prevention Could Improve EPA's Underground Storage Tank Program. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-12.

Report on Superfund and Mining Megasites: Lessons from the Coeur d'Alene River Basin. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-13.

EPA Can Better Manage Superfund Resources; and Information Security Series: Security Practices—



# Strategic Objective 3— Enhance Science and Research

Through 2008, provide and apply sound science for protecting and restoring land by conducting leading-edge research and developing a better understanding and characterization of environmental outcomes under Goal 3.

EPA continues to provide and apply sound science for protecting and restoring land by conducting leading-edge research and developing a better understanding and characterization of the environmental outcomes under Goal 3.

Over the past 5 years, EPA has established the science needed to demonstrate the ability of evapotranspiration (ET) covers, which use vegetation and soils as a sponge to prevent water transmission into landfill contents, to replace conventional landfill covers in many environmental settings. Continuing training and technology transfer activities in FY 2006 have encouraged landfill owners/operators and regulatory authorities to accept the new covers. ET covers have been or are being installed on landfills at

STRATEGIC OBJECTIVE 3—ENHANCE SCIENCE AND RESEARCH			
APG #	APG Title	APG Status	
3.7	Scientifically Defensible Decisions for Site Cleanup	Goal Met for FY 2006	

Detailed information on these APGs is provided in Section II.2—Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, page 164. Additionally, the data that EPA has used to measure its performance are described in the "Supplemental Information" to this report, provided on the Internet. See pages B-89–B-90 at http://www.epa.gov/ocfo/finstatement/2006PAR.

more than 30 sites, with cost savings estimated between a few thousand dollars and \$100,000 or more per acre. Research results influenced the responsible parties' cover selection and were cited in many of the permit applications. Additional training is scheduled for FY 2007.

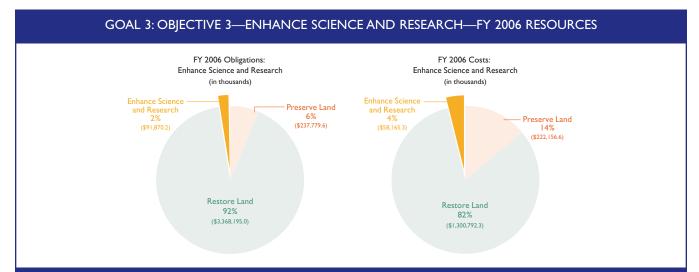
Also in 2006, EPA published a report describing the results of field research measuring vapor intrusion into homes overlying contaminated ground water.

Among other findings, the study illustrated a method to distinguish between volatile organic compounds originating in ground water and those from household sources. The minimally-invasive procedures tested in the study allow direct measurement of contaminants in household air and in the soil immediately below the slab. Results of this work and related research will help inform revisions to EPA's guidance on evaluating this exposure pathway.

Other EPA work in 2006 included research on monitored natural attenuation (MNA), which has proven to be a costeffective approach for cleaning up ground water contaminated with organic compounds under conditions where natural degradation processes are not much slower than remedial interventions like pumping and treating. Current research is evaluating the applicability of MNA for inorganic contamination, which has to rely on non-degradative mechanisms to remove the

#### **PCB Residue Effects Database**

When PCBs (polychlorinated biphenyls) are of concern at Superfund sites, lengthy and costly efforts may be required to define critical tissue residues and determine appropriate remediation goals. To shorten this effort and reduce conflict, EPA's research program has assembled a database on residue-effects for birds, fish, and mammals. Completed in 2006, the database contains 1969 test records for PCBs, 1626 records for polychlorinated dibenzo-p-dioxins, and 7181 records for polychlorinated dibenzofurans. In total, the database includes 904 papers of the 3646 reviewed for potential. In FY 2007, EPA's research program will make the database available to Superfund Remedial Project Managers and Risk Assessors via its ECOTOX website. The public, private sector, and regulatory authorities will all benefit from more efficient, transparent, and consistent risk estimation practices, which can streamline remedial actions by reducing unnecessary controversy and/or litigation.



#### FY 2006 RESOURCES FOR PROGRAM PROJECTS SUPPORTING THIS OBJECTIVE\*

Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY COSTS
Congressionally Mandated Projects	\$3,507.5	\$5,043.0
Homeland Security: Communication and Information	\$66.0	\$61.1
Homeland Security: Protection of EPA Personnel and Infrastructure	\$371.0	\$440.7
Research: Land Protection and Restoration	\$66,353.0	\$37,605.0
Research: SITE Program	\$4,569.5	\$3,886.3
Superfund: Remedial	\$6,554.2	\$4,726.1
Administrative Law	\$47.2	\$46.8
Alternative Dispute Resolution	\$13.3	\$15.9
Central Planning, Budgeting, and Finance	\$1,087.7	\$981.8
Civil Rights / Title VI Compliance	\$78.7	\$85.6
Congressional, Intergovernmental, External Relations	\$265.6	\$302.6
Exchange Network	\$349.1	\$162.7
Facilities Infrastructure and Operations	\$1,218.6	\$1,021.1
Acquisition Management	\$509.6	\$491.9
Human Resources Management	\$788.2	\$780.9
Information Security	\$98.7	\$102.9
IT / Data Management	\$4,280.3	\$679.6
Legal Advice: Environmental Program	\$463.6	\$496.2
Legal Advice: Support Program	\$207.7	\$226.8
Audits, Evaluations, and Investigations	\$402.5	\$369.1
Regional Science and Technology	\$12.4	\$25.5
Science Advisory Board	\$49.1	\$52.2
Small Minority Business Assistance	\$20.7	\$25.3
Financial Assistance Grants / IAG Management	\$376.4	\$374.8
Regulatory/Economic-Management and Analysis	\$179.5	\$161.4
TOTAL	\$91,870.1	\$58,165.3

<sup>\*</sup>Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

contamination from the migrating water. A cross-office team has developed a framework for developing lines of evidence for MNA for radioactive and non-radioactive metals. Research at the Industriplex Superfund site in Region 1 contributed to

selection of a remedy estimated to save \$13 million.

## ADDITIONAL INFORMATION RELATED TO OBJECTIVE 3:

#### PROGRAM EVALUATIONS:

Board of Scientific Counselors (BOSC) Subcommittee on Land Restoration and Preservation Research: Review of the Office of Research and Development's Land Restoration and Preservation Research Program. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-17.

PART: The Land Protection and Restoration Research program is being assessed in the 2006 PART process and results will be included in the FY 2008 President's Budget.

Web Links: http://www.epa.gov/ord/